



## RAW SEQUENCE LISTING ERROR REPORT

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Application Serial Number: 10/685,258A  
Source: IFWP  
Date Processed by STIC: 7/23/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

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- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

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<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>) , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box-1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):  
U.S. Patent and Trademark Office, 220 20<sup>th</sup> Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202



IFWO

## RAW SEQUENCE LISTING

DATE: 07/23/2004

PATENT APPLICATION: US/10/685,258A

TIME: 12:50:13

Input Set : A:\34132seq.txt

Output Set: N:\CRF4\07232004\J685258A.raw

3 <110> APPLICANT: Carr, Antony M.  
 5 <120> TITLE OF INVENTION: Cell-Cycle Checkpoint Genes  
 7 <130> FILE REFERENCE: 27866/34132  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/685,258A  
 C--> 10 <141> CURRENT FILING DATE: 2003-10-14  
 12 <150> PRIOR APPLICATION NUMBER: GB 9518220.0  
 13 <151> PRIOR FILING DATE: 1995-09-06  
 15 <160> NUMBER OF SEQ ID NOS: 4  
 17 <170> SOFTWARE: PatentIn Ver. 2.0

*pp 4-8, 10-14*

## ERRORED SEQUENCES

704 <210> SEQ ID NO: 2  
 705 <211> LENGTH: 2644  
 706 <212> TYPE: PRT  
 707 <213> ORGANISM: Homo sapiens  
 709 <400> SEQUENCE: 2  
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 711 1 5 10 15  
 713 Glu Leu Gly Ser Ala Thr Pro Glu Glu Tyr Asn Thr Val Val Gln Lys  
 714 20 25 30  
 716 Pro Arg Gln Ile Leu Cys Gln Phe Ile Asp Arg Ile Leu Thr Asp Val  
 717 35 40 45  
 719 Asn Val Val Ala Val Glu Leu Val Lys Lys Thr Asp Ser Gln Pro Thr  
 720 50 55 60  
 722 Ser Val Met Leu Leu Asp Phe Ile Gln His Ile Met Lys Ser Ser Pro  
 723 65 70 75 80  
 725 Leu Met Phe Val Asn Val Ser Gly Ser His Glu Arg Lys Gly Ser Cys  
 726 85 90 95  
 728 Ile Glu Phe Ser Asn Trp Ile Ile Thr Arg Leu Leu Arg Ile Ala Ala  
 729 100 105 110  
 731 Thr Pro Ser Cys His Leu Leu His Lys Lys Ile Cys Glu Val Ile Cys  
 732 115 120 125  
 734 Ser Leu Leu Phe Leu Phe Lys Ser Lys Ser Pro Ala Ile Phe Gly Val  
 735 130 135 140  
 737 Leu Thr Lys Glu Leu Leu Gln Leu Phe Glu Asp Leu Val Tyr Leu His  
 738 145 150 155 160  
 740 Arg Arg Asn Val Met Gly His Ala Val Glu Trp Pro Val Val Met Ser  
 741 165 170 175  
 743 Arg Phe Leu Ser Gln Leu Asp Glu His Met Gly Tyr Leu Gln Ser Ala  
 744 180 185 190  
 746 Pro Leu Gln Leu Met Ser Met Gln Asn Leu Glu Phe Ile Glu Val Thr

*pp 4-8*

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749 Leu Leu Met Val Leu Thr Arg Ile Ile Ala Ile Val Phe Phe Arg Arg
750          210          215          220
752 Gln Glu Leu Leu Leu Trp Gln Ile Gly Cys Val Leu Leu Glu Tyr Gly
753 225          230          235          240
755 Ser Pro Lys Ile Lys Ser Leu Ala Ile Ser Phe Leu Thr Glu Leu Phe
756          245          250          255
758 Gln Leu Gly Gly Leu Pro Ala Gln Pro Ala Ser Thr Phe Phe Ser Ser
759          260          265          270
761 Phe Leu Glu Leu Leu Lys His Leu Val Glu Met Asp Thr Asp Gln Leu
762          275          280          285
764 Lys Leu Tyr Glu Glu Pro Leu Ser Lys Leu Ile Lys Thr Leu Phe Pro
765          290          295          300
767 Phe Glu Ala Glu Ala Tyr Arg Asn Ile Glu Pro Val Tyr Leu Asn Met
768 305          310          315          320
770 Leu Leu Glu Lys Leu Cys Val Met Phe Glu Asp Gly Val Leu Met Arg
771          325          330          335
773 Leu Lys Ser Asp Leu Leu Lys Ala Ala Leu Cys His Leu Leu Gln Tyr
774          340          345          350
776 Phe Leu Lys Phe Val Pro Ala Gly Tyr Glu Ser Ala Leu Gln Val Arg
777          355          360          365
779 Lys Val Tyr Val Arg Asn Ile Cys Lys Ala Leu Leu Asp Val Leu Gly
780          370          375          380
782 Ile Glu Val Asp Ala Glu Tyr Leu Leu Gly Pro Leu Tyr Ala Ala Leu
783 385          390          395          400
785 Lys Met Glu Ser Met Glu Ile Ile Glu Glu Ile Gln Cys Gln Thr Gln
786          405          410          415
788 Gln Glu Asn Leu Ser Ser Asn Ser Asp Gly Ile Ser Pro Lys Arg Arg
789          420          425          430
791 Arg Leu Ser Ser Ser Leu Asn Pro Ser Lys Arg Ala Pro Lys Gln Thr
792          435          440          445
794 Glu Glu Ile Lys His Val Asp Met Asn Gln Lys Ser Ile Leu Trp Ser
795          450          455          460
797 Ala Leu Lys Gln Lys Ala Glu Ser Leu Gln Ile Ser Leu Glu Tyr Ser
798 465          470          475          480
800 Gly Leu Lys Asn Pro Val Ile Glu Met Leu Glu Gly Ile Ala Val Val
801          485          490          495
803 Leu Gln Leu Thr Ala Leu Cys Thr Val His Cys Ser His Gln Asn Met
804          500          505          510
806 Asn Cys Arg Thr Phe Lys Asp Cys Gln His Lys Ser Lys Lys Lys Pro
807          515          520          525
809 Ser Val Val Ile Thr Trp Met Ser Leu Asp Phe Tyr Thr Lys Val Leu
810          530          535          540
812 Lys Ser Cys Arg Ser Leu Leu Glu Ser Val Gln Lys Leu Asp Leu Glu
813 545          550          555          560
815 Ala Thr Ile Asp Lys Val Val Lys Ile Tyr Asp Ala Leu Ile Tyr Met
816          565          570          575
818 Gln Val Asn Ser Ser Phe Glu Asp His Ile Leu Glu Asp Leu Cys Gly
819          580          585          590

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821 Met Leu Ser Leu Pro Trp Ile Tyr Ser His Ser Asp Asp Gly Cys Leu
822      595      600      605
824 Lys Leu Thr Thr Phe Ala Ala Asn Leu Leu Thr Leu Ser Cys Arg Ile
825      610      615      620
827 Ser Asp Ser Tyr Ser Pro Gln Ala Gln Ser Arg Cys Val Phe Leu Leu
828 625      630      635      640
830 Thr Leu Phe Pro Arg Arg Ile Phe Leu Glu Trp Arg Thr Ala Val Tyr
831      645      650      655
833 Asn Trp Ala Leu Gln Ser Ser His Glu Val Ile Arg Ala Ser Cys Val
834      660      665      670
836 Ser Gly Phe Phe Ile Leu Leu Gln Gln Gln Asn Ser Cys Asn Arg Val
837      675      680      685
839 Pro Lys Ile Leu Ile Asp Lys Val Lys Asp Asp Ser Asp Ile Val Lys
840      690      695      700
842 Lys Glu Phe Ala Ser Ile Leu Gly Gln Leu Val Cys Thr Leu His Gly
843 705      710      715      720
845 Met Phe Tyr Leu Thr Ser Ser Leu Thr Glu Pro Phe Ser Glu His Gly
846      725      730      735
848 His Val Asp Leu Phe Cys Arg Asn Leu Lys Ala Thr Ser Gln His Glu
849      740      745      750
851 Cys Ser Ser Ser Gln Leu Lys Ala Ser Val Cys Lys Pro Phe Leu Phe
852      755      760      765
854 Leu Leu Lys Lys Lys Ile Pro Ser Pro Val Lys Leu Ala Phe Ile Asp
855      770      775      780
857 Asn Leu His His Leu Cys Lys His Leu Asp Phe Arg Glu Asp Glu Thr
858 785      790      795      800
860 Asp Val Lys Ala Val Leu Gly Thr Leu Leu Asn Leu Met Glu Asp Pro
861      805      810      815
863 Asp Lys Asp Val Arg Val Ala Phe Ser Gly Asn Ile Lys His Ile Leu
864      820      825      830
866 Glu Ser Leu Asp Ser Glu Asp Gly Phe Ile Lys Glu Leu Phe Val Leu
867      835      840      845
869 Arg Met Lys Glu Ala Tyr Thr His Ala Gln Ile Ser Arg Asn Asn Glu
870      850      855      860
872 Leu Lys Asp Thr Leu Ile Leu Thr Thr Gly Asp Ile Gly Arg Ala Ala
873 865      870      875      880
875 Lys Gly Asp Leu Val Pro Phe Ala Leu Leu His Leu Leu His Cys Leu
876      885      890      895
878 Leu Ser Lys Ser Ala Ser Val Ser Gly Ala Ala Tyr Thr Glu Ile Arg
879      900      905      910
881 Ala Leu Val Ala Ala Lys Ser Val Lys Leu Gln Ser Phe Phe Ser Gln
882      915      920      925
884 Tyr Lys Lys Pro Ile Cys Gln Phe Leu Val Glu Ser Leu His Ser Ser
885      930      935      940
887 Gln Met Thr Ala Leu Pro Asn Thr Pro Cys Gln Asn Ala Asp Val Arg
888 945      950      955      960
890 Lys Gln Asp Val Ala His Gln Arg Glu Met Ala Leu Asn Thr Leu Ser
891      965      970      975
893 Glu Ile Ala Asn Val Phe Asp Phe Pro Asp Leu Asn Arg Phe Leu Thr

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894          980          985          990
896 Arg Thr Leu Gln Val Leu Leu Pro Asp Leu Ala Ala Lys Ala Ser Pro
897          995          1000          1005
899 Ala Ala Ser Ala Leu Ile Arg Thr Leu Gly Lys Gln Leu Asn Val Asn
900      1010          1015          1020
902 Arg Arg Glu Ile Leu Ile Asn Asn Phe Lys Tyr Ile Phe Ser His Leu
E--> 903 925 1025          1030          1035          1040
905 Val Cys Ser Cys Ser Lys Asp Glu Leu Glu Arg Ala Leu His Tyr Leu
906          1045          1050          1055
908 Lys Asn Glu Thr Glu Ile Glu Leu Gly Ser Leu Leu Arg Gln Asp Phe
909          1060          1065          1070
911 Gln Gly Leu His Asn Glu Leu Leu Leu Arg Ile Gly Glu His Tyr Gln
912          1075          1080          1085
914 Gln Val Phe Asn Gly Leu Ser Ile Leu Ala Ser Phe Ala Ser Ser Asp
915      1090          1095          1100
917 Asp Pro Tyr Gln Gly Pro Arg Asp Ile Ile Ser Pro Glu Leu Met Ala
E--> 918 105 1105          1110          1115          1120
920 Asp Tyr Leu Gln Pro Lys Leu Leu Gly Ile Leu Ala Phe Phe Asn Met
921          1125          1130          1135
923 Gln Leu Leu Ser Ser Val Gly Ile Glu Asp Lys Lys Met Ala Leu
924          1140          1145          1150
926 Asn Ser Leu Met Ser Leu Met Lys Leu Met Gly Pro Lys His Val Ser
927          1155          1160          1165
929 Ser Val Arg Val Lys Met Met Thr Thr Leu Arg Thr Gly Leu Arg Phe
930      1170          1175          1180
932 Lys Asp Asp Phe Pro Glu Leu Cys Cys Arg Ala Trp Asp Cys Phe Val
E--> 933 185 1185          1190          1195          1200
935 Arg Cys Leu Asp His Ala Cys Leu Gly Ser Leu Leu Ser His Val Ile
936          1205          1210          1215
938 Val Ala Leu Leu Pro Leu Ile His Ile Gln Pro Lys Glu Thr Ala Ala
939          1220          1225          1230
941 Ile Phe His Tyr Leu Ile Ile Glu Asn Arg Asp Ala Val Gln Asp Phe
942      1235          1240          1245
944 Leu His Glu Ile Tyr Phe Leu Pro Asp His Pro Glu Leu Lys Lys Ile
945      1250          1255          1260
947 Lys Ala Val Leu Gln Glu Tyr Arg Lys Glu Thr Ser Glu Ser Thr Asp
E--> 948 265 1265          1270          1275          1280
950 Leu Gln Thr Thr Leu Gln Leu Ser Met Lys Ala Ile Gln His Glu Asn
951          1285          1290          1295
953 Val Asp Val Arg Ile His Ala Leu Thr Ser Leu Lys Glu Thr Leu Tyr
954          1300          1305          1310
956 Lys Asn Gln Glu Lys Leu Ile Lys Tyr Ala Thr Asp Ser Glu Thr Val
957          1315          1320          1325
959 Glu Pro Ile Ile Ser Gln Leu Val Thr Val Leu Leu Lys Gly Cys Gln
960      1330          1335          1340
962 Asp Ala Asn Ser Gln Ala Arg Leu Leu Cys Gly Glu Cys Leu Gly Glu
E--> 963 345 1345          1350          1355          1360
965 Leu Gly Ala Ile Asp Pro Gly Arg Leu Asp Phe Ser Thr Thr Glu Thr
966          1365          1370          1375

```

When numbering  
the first amino  
acid on a line,  
begin the  
number directly  
under the first  
letter of the  
amino acid.  
Otherwise, the  
first number will  
be "cut off."

e.g. Arg |<sup>s</sup>/<sub>e</sub>| Arg  
1025 |<sup>s</sup>/<sub>e</sub>|

Please leave a  
space after the  
last number and  
the next amino  
acid, as shown  
above.

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968 Gln Gly Lys Asp Phe Thr Phe Val Thr Gly Val Glu Asp Ser Ser Phe
969          1380          1385          1390
971 Ala Tyr Gly Leu Leu Met Glu Leu Thr Arg Ala Tyr Leu Ala Tyr Ala
972          1395          1400          1405
974 Asp Asn Ser Arg Ala Gln Asp Ser Ala Ala Tyr Ala Ile Gln Glu Leu
975          1410          1415          1420
977 Leu Ser Ile Tyr Asp Cys Arg Glu Met Glu Thr Asn Gly Pro Gly His
E--> 978 425/1425          1430          1435          1440
980 Gln Leu Trp Arg Arg Phe Pro Glu His Val Arg Glu Ile Leu Glu Pro
981          1445          1450          1455
983 His Leu Asn Thr Arg Tyr Lys Ser Ser Gln Lys Ser Thr Asp Trp Ser
984          1460          1465          1470
986 Gly Val Lys Lys Pro Ile Tyr Leu Ser Lys Leu Gly Ser Asn Phe Ala
987          1475          1480          1485
989 Glu Trp Ser Ala Ser Trp Ala Gly Tyr Leu Ile Thr Lys Val Arg His
990          1490          1495          1500
992 Asp Leu Ala Ser Lys Ile Phe Thr Cys Cys Ser Ile Met Met Lys His
E--> 993 505/1505          1510          1515          1520
995 Asp Phe Lys Val Thr Ile Tyr Leu Leu Pro His Ile Leu Val Tyr Val
996          1525          1530          1535
998 Leu Leu Gly Cys Asn Gln Glu Asp Gln Gln Glu Val Tyr Ala Glu Ile
999          1540          1545          1550
1001 Met Ala Val Leu Lys His Asp Asp Gln His Thr Ile Asn Thr Gln Asp
1002          1555          1560          1565
1004 Ile Ala Ser Asp Leu Cys Gln Leu Ser Thr Gln Thr Val Phe Ser Met
1005          1570          1575          1580
1007 Leu Asp His Leu Thr Gln Trp Ala Arg His Lys Phe Gln Ala Leu Lys
E--> 1008 585/1585          1590          1595          1600
1010 Ala Glu Lys Cys Pro His Ser Lys Ser Asn Arg Asn Lys Val Asp Ser
1011          1605          1610          1615
1013 Met Val Ser Thr Val Asp Tyr Glu Asp Tyr Gln Ser Val Thr Arg Phe
1014          1620          1625          1630
1016 Leu Asp Leu Ile Pro Gln Asp Thr Leu Ala Val Ala Ser Phe Arg Ser
1017          1635          1640          1645
1019 Lys Ala Tyr Thr Arg Ala Val Met His Phe Glu Ser Phe Ile Thr Glu
1020          1650          1655          1660
1022 Lys Lys Gln Asn Ile Gln Glu His Leu Gly Phe Leu Gln Lys Leu Tyr
E--> 1023 665/1665          1670          1675          1680
1025 Ala Ala Met His Glu Pro Asp Gly Val Ala Gly Val Ser Ala Ile Arg
1026          1685          1690          1695
1028 Lys Ala Glu Pro Ser Leu Lys Glu Gln Ile Leu Glu His Glu Ser Leu
1029          1700          1705          1710
1031 Gly Leu Leu Arg Asp Ala Thr Ala Cys Tyr Asp Arg Ala Ile Gln Leu
1032          1715          1720          1725
1034 Glu Pro Asp Gln Ile Ile His Tyr His Gly Val Val Lys Ser Met Leu
1035          1730          1735          1740
1037 Gly Leu Gly Gln Leu Ser Thr Val Ile Thr Gln Val Asn Gly Val His
E--> 1038 745/1745          1750          1755          1760
1040 Ala Asn Arg Ser Glu Trp Thr Asp Glu Leu Asn Thr Tyr Arg Val Glu

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1041          1765          1770          1775
1043 Ala Ala Trp Lys Leu Ser Gln Trp Asp Leu Val Glu Asn Tyr Leu Ala
1044          1780          1785          1790
1046 Ala Asp Gly Lys Ser Thr Thr Trp Ser Val Arg Leu Gly Gln Leu Leu
1047          1795          1800          1805
1049 Leu Ser Ala Lys Lys Arg Asp Ile Thr Ala Phe Tyr Asp Ser Leu Lys
1050          1810          1815          1820
1052 Leu Val Arg Ala Glu Gln Ile Val Pro Leu Ser Ala Ala Ser Phe Glu
E--> 1053 (825) 1825          1830          1835          1840
1055 Arg Gly Ser Tyr Gln Arg Gly Tyr Glu Tyr Ile Val Arg Leu His Met
1056          1845          1850          1855
1058 Leu Cys Glu Leu Glu His Ser Ile Lys Pro Leu Phe Gln His Ser Pro
1059          1860          1865          1870
1061 Gly Asp Ser Ser Gln Glu Asp Ser Leu Asn Trp Val Ala Arg Leu Glu
1062          1875          1880          1885
1064 Met Thr Gln Asn Ser Tyr Arg Ala Lys Asp Pro Ile Leu Ala Leu Arg
1065          1890          1895          1900
1067 Arg Ala Leu Leu Ser Leu Asn Lys Arg Pro Asp Tyr Asn Glu Met Val
E--> 1068 (905) 1905          1910          1915          1920
1070 Gly Glu Cys Trp Leu Gln Ser Ala Arg Val Ala Arg Lys Ala Gly His
1071          1925          1930          1935
1073 His Gln Thr Ala Tyr Asn Ala Leu Leu Asn Ala Gly Glu Ser Arg Leu
1074          1940          1945          1950
1076 Ala Glu Leu Tyr Val Glu Arg Ala Lys Trp Leu Trp Ser Lys Gly Asp
1077          1955          1960          1965
1079 Val His Gln Ala Leu Ile Val Leu Gln Lys Gly Val Glu Leu Cys Phe
1080          1970          1975          1980
1082 Pro Glu Asn Glu Thr Pro Pro Glu Gly Lys Asn Met Leu Ile His Gly
E--> 1083 (985) 1985          1990          1995          2000
1085 Arg Ala Met Leu Leu Val Gly Arg Phe Met Glu Glu Thr Ala Asn Phe
1086          2005          2010          2015
1088 Glu Ser Asn Ala Ile Met Lys Lys Tyr Lys Asp Val Thr Ala Cys Leu
1089          2020          2025          2030
1091 Pro Glu Trp Glu Asp Gly His Phe Tyr Leu Ala Lys Tyr Tyr Asp Lys
1092          2035          2040          2045
1094 Leu Met Pro Met Val Thr Asp Asn Lys Met Glu Lys Gln Gly Asp Leu
1095          2050          2055          2060
1097 Ile Arg Tyr Ile Val Leu His Phe Gly Arg Ser Leu Gln Tyr Gly Asn
E--> 1098 (065) 2065          2070          2075          2080
1100 Gln Phe Ile Tyr Gln Ser Met Pro Arg Met Leu Thr Leu Trp Leu Asp
1101          2085          2090          2095
1103 Tyr Gly Thr Lys Ala Tyr Glu Trp Glu Lys Ala Gly Arg Ser Asp Arg
1104          2100          2105          2110
1106 Val Gln Met Arg Asn Asp Leu Gly Lys Ile Asn Lys Val Ile Thr Glu
1107          2115          2120          2125
1109 His Thr Asn Tyr Leu Ala Pro Tyr Gln Phe Leu Thr Ala Phe Ser Gln
1110          2130          2135          2140
1112 Leu Ile Ser Arg Ile Cys His Ser His Asp Glu Val Phe Val Val Leu
E--> 1113 (145) 2145          2150          2155          2160

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1115 Met Glu Ile Ile Ala Lys Val Phe Leu Ala Tyr Pro Gln Gln Ala Met  
 1116 2165 2170 2175  
 1118 Trp Met Met Thr Ala Val Ser Lys Ser Ser Tyr Pro Met Arg Val Asn  
 1119 2180 2185 2190  
 1121 Arg Cys Lys Glu Ile Leu Asn Lys Ala Ile His Met Lys Lys Ser Leu  
 1122 2195 2200 2205  
 1124 Glu Lys Phe Val Gly Asp Ala Thr Arg Leu Thr Asp Lys Leu Leu Glu  
 1125 2210 2215 2220  
 1127 Leu Cys Asn Lys Pro Val Asp Gly Ser Ser Ser Thr Leu Ser Met Ser  
 E--> 1128 225 2230 2235 2240  
 1130 Thr His Phe Lys Met Leu Lys Lys Leu Val Glu Glu Ala Thr Phe Ser  
 1131 2245 2250 2255  
 1133 Glu Ile Leu Ile Pro Leu Gln Ser Val Met Ile Pro Thr Leu Pro Ser  
 1134 2260 2265 2270  
 1136 Ile Leu Gly Thr His Ala Asn His Ala Ser His Glu Pro Phe Pro Gly  
 1137 2275 2280 2285  
 1139 His Trp Ala Tyr Ile Ala Gly Phe Asp Asp Met Val Glu Ile Leu Ala  
 1140 2290 2295 2300  
 1142 Ser Leu Gln Lys Pro Lys Lys Ile Ser Leu Lys Gly Ser Asp Gly Lys  
 E--> 1143 305 2310 2315 2320  
 1145 Phe Tyr Ile Met Met Cys Lys Pro Lys Asp Asp Leu Arg Lys Asp Cys  
 1146 2325 2330 2335  
 1148 Arg Leu Met Glu Phe Asn Ser Leu Ile Asn Lys Cys Leu Arg Lys Asp  
 1149 2340 2345 2350  
 1151 Ala Glu Ser Arg Arg Arg Glu Leu His Ile Arg Thr Tyr Ala Val Ile  
 1152 2355 2360 2365  
 1154 Pro Leu Asn Asp Glu Cys Gly Ile Ile Glu Trp Val Asn Asn Thr Ala  
 1155 2370 2375 2380  
 1157 Gly Leu Arg Pro Ile Leu Thr Lys Leu Tyr Lys Glu Lys Gly Val Tyr  
 E--> 1158 385 2390 2395 2400  
 1160 Met Thr Gly Lys Glu Leu Arg Gln Cys Met Leu Pro Lys Ser Ala Ala  
 1161 2405 2410 2415  
 1163 Leu Ser Glu Lys Leu Lys Val Phe Arg Glu Phe Leu Leu Pro Arg His  
 1164 2420 2425 2430  
 1166 Pro Pro Ile Phe His Glu Trp Phe Leu Arg Thr Phe Pro Asp Pro Thr  
 1167 2435 2440 2445  
 1169 Ser Trp Tyr Ser Ser Arg Ser Ala Tyr Cys Arg Ser Thr Ala Val Met  
 1170 2450 2455 2460  
 1172 Ser Met Val Gly Tyr Ile Leu Gly Leu Gly Asp Arg His Gly Glu Asn  
 E--> 1173 465 2470 2475 2480  
 1175 Ile Leu Phe Asp Ser Leu Thr Gly Glu Cys Val His Val Asp Phe Asn  
 1176 2485 2490 2495  
 1178 Cys Leu Phe Asn Lys Gly Glu Thr Phe Glu Val Pro Glu Ile Val Pro  
 1179 2500 2505 2510  
 1181 Phe Arg Leu Thr His Asn Met Val Asn Gly Met Gly Pro Met Gly Thr  
 1182 2515 2520 2525  
 1184 Glu Gly Leu Phe Arg Arg Ala Cys Glu Val Thr Met Arg Leu Met Arg  
 1185 2530 2535 2540  
 1187 Asp Gln Arg Glu Pro Leu Met Ser Val Leu Lys Thr Phe Leu His Asp

*same*  
*error*



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E--> 1186 545 2550 2555 2560

1190 Pro Leu Val Glu Trp Ser Lys Pro Val Lys Gly His Ser Lys Ala Pro

1191 2565 2570 2575

1193 Leu Asn Glu Thr Gly Glu Val Val Asn Glu Lys Ala Lys Thr His Val

1194 2580 2585 2590

1196 Leu Asp Ile Glu Gln Arg Leu Gln Gly Val Ile Lys Thr Arg Asn Arg

1197 2595 2600 2605

1199 Val Thr Gly Leu Pro Leu Ser Ile Glu Gly His Val His Tyr Leu Ile

1200 2610 2615 2620

1202 Gln Glu Ala Thr Asp Glu Asn Leu Leu Cys Gln Met Tyr Leu Gly Trp

E--> 1203 625 2630 2635 2640

1205 Thr Pro Tyr Met

1848 <210> SEQ ID NO: 4

1849 <211> LENGTH: 2386

1850 <212> TYPE: PRT

1851 <213> ORGANISM: Homo sapiens

1853 <400> SEQUENCE: 4

1854 Met Ser Gln His Ala Lys Arg Lys Ala Gly Ser Leu Asp Leu Ser Pro

1855 1 5 10 15

1857 Arg Gly Leu Asp Asp Arg Gln Ala Phe Gly Gln Leu Leu Lys Glu Val

1858 20 25 30

1860 Leu Ala Leu Asp Lys Glu His Glu Leu Gly Arg Ser Asn Ser Leu Pro

1861 35 40 45

1863 Ser Met Thr Ser Glu Leu Val Glu Val Leu Ile Glu Val Gly Leu Leu

1864 50 55 60

1866 Ala Phe Lys His Asp Asp Ser Lys Ser Glu Phe Ile Ser Pro Lys Met

1867 65 70 75 80

1869 Leu Lys Glu Ala His Leu Ser Leu Gln Ala Leu Met Leu Ile Leu Lys

1870 85 90 95

1872 Arg Ser Pro Thr Val Leu Arg Glu Ile Lys Ser Ser Val Thr Leu Leu

1873 100 105 110

1875 Asp Trp Ile Leu Pro Arg Thr Ile Ser Leu Phe Ala Asp Ile Arg Phe

1876 115 120 125

1878 Ile Lys Leu Phe Asp Ser Leu Lys Glu Phe His Lys Leu Ile Tyr Gln

1879 130 135 140

1881 Leu Ile Ser Glu Lys Ser Phe Leu Trp Asp Leu Tyr Ala Ser Phe Met

1882 145 150 155 160

1884 Arg Tyr Trp Lys Tyr Ile Thr Asn Val Ser Ser Ile Val Leu Gln

1885 165 170 175

1887 Ile Thr Asn Ala Thr Phe Pro Tyr Lys Met Pro Ser Pro Asn Ser Gln

1888 180 185 190

1890 Pro Leu Gln Ser Ile Ser Pro Asn Tyr Pro Thr His Arg Glu Asp Lys

1891 195 200 205

1893 Phe Asp Leu Leu Ile Ile Asn Ile Glu Glu Ala Cys Thr Phe Phe Phe

1894 210 215 220

1896 Glu Ser Ala His Phe Phe Ala Gln Cys Ser Tyr Leu Lys Lys Ser Asn

1897 225 230 235 240

1899 Phe Pro Ser Pro Pro Leu Phe Thr Ala Trp Thr Trp Ile Lys Pro Cys

1900 245 250 255

*pp 10-14*

## RAW SEQUENCE LISTING

DATE: 07/23/2004

PATENT APPLICATION: US/10/685,258A

TIME: 12:50:13

Input Set : A:\34132seq.txt

Output Set: N:\CRF4\07232004\J685258A.raw

```

1902 Phe Phe Asn Phe Val Ile Leu Leu Lys Arg Ile Ser Ile Gly Asp Ser
1903           260           265           270
1905 Gln Leu Phe Leu His Leu His Ser Arg Ile Val Gln Thr Leu Cys Cys
1906           275           280           285
1908 Phe Ser Leu Asn Phe Ile Tyr His Gly Leu Pro Ile Cys Glu Lys Ser
1909           290           295           300
1911 Lys His Ile Leu Met Ser Ser Ile Asn Leu Thr Leu Gly Ser Leu Lys
1912 305           310           315           320
1914 Lys Thr Tyr Thr Val Ala Asn Thr Ala Ile Ser Leu Phe Phe Leu Ser
1915           325           330           335
1917 Leu Phe Val Leu Pro Lys Thr Val Ala Gly Leu Phe Tyr Pro Phe Gly
1918           340           345           350
1920 Val Ser Leu Leu Ser Asp Phe Lys Val Leu Glu Gln Leu Glu Pro Asp
1921           355           360           365
1923 Ser Asp Leu Lys Lys Ala Ile Ile Leu Phe Lys Cys Arg Tyr Gln Ser
1924           370           375           380
1926 Ser Glu Ile Asp Gln Thr Thr Leu Arg Ala Phe Gly Glu Ile Cys Thr
1927 385           390           395           400
1929 Gly Lys Leu Glu Asn Thr Leu Phe Ser Asn Ser Glu Leu Asn Leu Phe
1930           405           410           415
1932 Leu Leu His Tyr Leu Ser Leu Asp Asn Asp Leu Ser Asn Ile Leu Lys
1933           420           425           430
1935 Val Asp Phe Gln Asn Gly His Asn Ile Cys Thr Phe Ala Lys Trp Cys
1936           435           440           445
1938 Ile Asn Asn Asn Leu Asp Glu Pro Ser Asn Leu Lys His Phe Arg Glu
1939           450           455           460
1941 Met Leu Asp Tyr Tyr Ser Ser His Asn Val Thr Ile Ser Glu Asp Asp
1942 465           470           475           480
1944 Leu Lys Asn Phe Ser Leu Val Leu Cys Thr His Val Ala Lys Val Asn
1945           485           490           495
1947 Glu Lys Thr Asn Ser Ile Phe Arg Thr Tyr Glu Val His Gly Cys Glu
1948           500           505           510
1950 Val Cys Asn Ser Phe Cys Leu Leu Phe Asp Glu Arg Ser Pro Phe Lys
1951           515           520           525
1953 Ile Pro Tyr His Glu Leu Phe Cys Ala Leu Leu Lys Asn Pro Asp Ile
1954           530           535           540
1956 Ile Ser Ser Ser Val Lys Gln Ser Leu Leu Leu Asp Gly Phe Phe Arg
1957 545           550           555           560
1959 Trp Ser Gln His Cys Ser Asn Phe Asn Lys Glu Ser Met Leu Ser Leu
1960           565           570           575
1962 Arg Glu Phe Ile Met Lys Ala Leu Ala Ser Thr Ser Arg Cys Leu Arg
1963           580           585           590
1965 Val Val Ala Ala Lys Val Leu Pro Ile Phe Ile Lys Gly Pro Asn Asn
1966           595           600           605
1968 Leu Asp Ile Val Glu Phe His Lys Glu Ser Lys Ala Leu Ile Phe Asn
1969           610           615           620
1971 Thr Leu Lys Ile Leu Ala Val Glu Asn Thr Ala Ile Leu Glu Thr Val
1972 625           630           635           640
1974 Ile Leu Ser Trp Ile Ser Leu Ser Arg Val Val Glu Glu Glu Glu Leu

```

## RAW SEQUENCE LISTING

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Input Set : A:\34132seq.txt

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```

1975          645          650          655
1977 His Phe Val Leu Glu Val Ile Ser Ser Val Ile Asn Ser Gly Ile
1978          660          665          670
1980 Phe Tyr Gln Gly Ile Gly Leu Ser Ala Leu Gln Gln Ile Ala Ser Thr
1981          675          680          685
1983 Arg His Ile Ser Val Trp Gln Leu Leu Ser Pro Tyr Trp Pro Thr Val
1984          690          695          700
1986 Ser Val Ala Ile Val Gln Gly Met Gly Lys Lys Pro Asn Ile Ala Ser
1987 705          710          715          720
1989 Leu Phe Ala Gln Leu Met Asn Ile Ser Glu Gly Asp Phe Leu Ile Arg
1990          725          730          735
1992 Thr Gln Ala Tyr Thr Leu Pro Phe Leu Val Leu Thr Lys Asn Lys Ala
1993          740          745          750
1995 Leu Ile Val Arg Ile Ala Glu Leu Ser Gln Ser Asp Val Ala Thr Leu
1996          755          760          765
1998 Cys Leu Thr Asn Met His Lys Ile Leu Ala Ser Leu Leu Thr Thr Asp
1999          770          775          780
2001 His Pro Asn Leu Glu Glu Ser Val Met Leu Leu Leu Ser Leu Ala Thr
2002 785          790          795          800
2004 Ser Asp Phe Glu Lys Val Asp Leu Thr Ser Leu Leu Arg Ser Asp Pro
2005          805          810          815
2007 Ile Ser Ile Thr Val Glu Leu Leu Gln Leu Tyr Gln Asn Asp Val Pro
2008          820          825          830
2010 His Glu Lys Ile Glu Asn Ala Leu Arg Lys Val Ala Met Ile Val Ser
2011          835          840          845
2013 Gln Val Val Asn Asp Glu Asp Leu Ser Asn Lys Glu Leu Leu Tyr Asp
2014          850          855          860
2016 Phe Phe Asn Asn His Ile Leu Gly Ile Leu Ala Glu Phe Ser Asn Ile
2017 865          870          875          880
2019 Leu Asn Asp Leu Lys Gly Lys Thr Ser Ile Asn Glu Lys Ile Lys Thr
2020          885          890          895
2022 Ile Val Gly Ile Glu Lys Met Leu Ser Leu Cys Gly Gly Ala Val Lys
2023          900          905          910
2025 Leu Gly Leu Pro Gln Ile Leu Ser Asn Leu Gln Ser Ala Phe Gln Asn
2026          915          920          925
2028 Glu His Leu Arg Phe Tyr Ala Ile Lys Ala Trp Phe Ser Leu Ile Leu
2029          930          935          940
2031 Ala Thr Lys Glu Pro Glu Tyr Ser Ser Ile Ala Gly Leu Ser Leu Val
2032 945          950          955          960
2034 Ile Leu Pro Pro Leu Phe Pro Tyr Leu Glu Pro Gln Glu Ala Glu Leu
2035          965          970          975
2037 Val Ile Gln Ile Phe Asp Phe Ile Ser Ser Asp Thr His Lys Cys Leu
2038          980          985          990
2040 Gln Gly Leu Lys Trp Ala Ile Pro Thr Ser Leu Asp Ser Ala Cys Phe
2041          995          1000          1005
2043 Ser Leu Lys Ala Lys Glu Ile Phe Cys Ser Leu Gln Asn Glu Asp Phe
2044          1010          1015          1020
2046 Tyr Ser Glu Leu Gln Ser Ile Ile Lys Cys Leu Thr Asn Glu Asn Glu
E--> 2047 025 1025          1030          1035          1040

```

*same error*

## RAW SEQUENCE LISTING

DATE: 07/23/2004

PATENT APPLICATION: US/10/685,258A

TIME: 12:50:13

Input Set : A:\34132seq.txt

Output Set: N:\CRF4\07232004\J685258A.raw

2049 Pro Val Cys Tyr Leu Gly Leu Gln Lys Leu Glu Leu Phe Phe Gln Ala  
 2050 1045 1050 1055  
 2052 Lys Val Asp Glu Leu His Asp Thr Leu Asn Leu Asp Ile Ser Asn Glu  
 2053 1060 1065 1070  
 2055 Val Leu Asp Gln Leu Leu Arg Cys Leu Leu Asp Cys Cys Val Lys Tyr  
 2056 1075 1080 1085  
 2058 Ala Ser Thr Asn Met Gln Ile Ser Tyr Leu Ala Ala Lys Asn Leu Gly  
 2059 1090 1095 1100  
 2061 Glu Leu Gly Ala Ile Asp Pro Ser Arg Ala Lys Ala Gln His Ile Ile  
 E--> 2062 105 1105 1110 1115 1120  
 2064 Lys Glu Thr Val Val Leu Asp Asn Phe Glu Asn Gly Glu Glu Ser Leu  
 2065 1125 1130 1135  
 2067 Lys Phe Ile Leu Asp Phe Met Gln Ser Gln Leu Ile Pro Ala Phe Leu  
 2068 1140 1145 1150  
 2070 Val Thr Thr Asp Thr Lys Ala Gln Gly Phe Leu Ala Tyr Ala Leu Gln  
 2071 1155 1160 1165  
 2073 Glu Phe Leu Lys Leu Gly Gly Phe Lys Ser Ala Val Ile Asn Lys Lys  
 2074 1170 1175 1180  
 2076 Lys Gly Leu Thr Val Val Thr Glu His Trp Met Ser Leu Pro Asp Leu  
 E--> 2077 185 1185 1190 1195 1200  
 2079 Ser Lys Arg Val Leu Ile Pro Phe Leu Thr Ser Lys Tyr His Leu Thr  
 2080 1205 1210 1215  
 2082 Pro Ile Pro Lys Ile Asp Ile Arg Tyr Pro Ile Tyr Lys Glu Asn Val  
 2083 1220 1225 1230  
 2085 Thr Ile His Thr Trp Met Gln Leu Phe Ser Leu Lys Leu Met Glu Tyr  
 2086 1235 1240 1245  
 2088 Ala His Ser Gln Asn Ala Glu Lys Ile Phe Gly Ile Cys Ser Lys Val  
 2089 1250 1255 1260  
 2091 Val Lys Asp Gln Glu Val Asn Ile Pro Cys Phe Leu Leu Pro Phe Leu  
 E--> 2092 265 1265 1270 1275 1280  
 2094 Val Leu Asn Val Ile Leu Thr Glu Ser Glu Leu Glu Val Asn Lys Val  
 2095 1285 1290 1295  
 2097 Ile Glu Glu Phe Gln Leu Val Ile Asn Gln Pro Gly Pro Asp Gly Leu  
 2098 1300 1305 1310  
 2100 Asn Ser Val Gly Gln Gln Arg Tyr Thr Ser Phe Val Asp Val Phe Phe  
 2101 1315 1320 1325  
 2103 Lys Ile Val Asp Tyr Leu Asn Lys Trp Leu Arg Met Arg Lys Lys Arg  
 2104 1330 1335 1340  
 2106 Asn Trp Asp Arg Arg Ser Ala Ile Ala Arg Lys Glu Asn Arg Tyr Met  
 E--> 2107 345 1345 1350 1355 1360  
 2109 Ser Val Glu Asp Ala Thr Ser Arg Glu Ser Ser Ile Ser Lys Val Glu  
 2110 1365 1370 1375  
 2112 Ser Phe Leu Ser Arg Phe Pro Ser Lys Thr Leu Gly Ile Val Ser Leu  
 2113 1380 1385 1390  
 2115 Asn Cys Gly Phe His Ala Arg Ala Leu Phe Tyr Trp Glu Gln His Ile  
 2116 1395 1400 1405  
 2118 Arg Asn Ala Thr Ala Pro Tyr Ala Ala Leu Glu Ser Asp Tyr Arg Val  
 2119 1410 1415 1420  
 2121 Leu Gln Glu Ile Tyr Ala Gly Ile Asp Asp Pro Asp Glu Ile Glu Ala

*same*

## RAW SEQUENCE LISTING

DATE: 07/23/2004

PATENT APPLICATION: US/10/685,258A

TIME: 12:50:13

Input Set : A:\34132seq.txt

Output Set: N:\CRF4\07232004\J685258A.raw

```

E--> 2122 425          1430          1435          1440
2124 Val Ser Leu Asn Phe His Asp Tyr Ser Phe Asp Gln Gln Leu Leu Leu
2125          1445          1450          1455
2127 His Glu Asn Ser Gly Thr Trp Asp Ser Ala Leu Ser Cys Tyr Glu Ile
2128          1460          1465          1470
2130 Ile Ile Gln Lys Asp Pro Glu Asn Lys Lys Ala Lys Ile Gly Leu Leu
2131          1475          1480          1485
2133 Asn Ser Met Leu Gln Ser Gly His Tyr Glu Ser Leu Val Leu Ser Leu
2134          1490          1495          1500
2136 Asp Ser Phe Ile Ile Asn Asp Asn His Glu Tyr Ser Lys Met Leu Asn
E--> 2137 505          1510          1515          1520
2139 Leu Gly Ile Glu Ala Ser Trp Arg Ser Leu Ser Ile Asp Ser Leu Lys
2140          1525          1530          1535
2142 Lys Cys Leu Ser Lys Ser Asn Leu Glu Ser Phe Glu Ala Lys Leu Gly
2143          1540          1545          1550
2145 Ser Ile Phe Tyr Gln Tyr Leu Arg Lys Asp Ser Phe Ala Glu Leu Thr
2146          1555          1560          1565
2148 Glu Arg Leu Gln Pro Leu Tyr Val Asp Ala Ala Thr Ala Ile Ala Asn
2149          1570          1575          1580
2151 Thr Gly Ala His Ser Ala Tyr Asp Cys Tyr Asp Ile Leu Ser Lys Leu
E--> 2152 585          1590          1595          1600
2154 His Ala Ile Asn Asp Phe Ser Arg Ile Ala Glu Thr Asp Gly Ile Val
2155          1605          1610          1615
2157 Ser Asp Asn Leu Asp Ile Val Leu Arg Arg Arg Leu Ser Gln Val Ala
2158          1620          1625          1630
2160 Pro Tyr Gly Lys Phe Lys His Gln Ile Leu Ser Thr His Leu Val Gly
2161          1635          1640          1645
2163 Tyr Glu Lys Phe Glu Asn Thr Lys Lys Thr Ala Glu Ile Tyr Leu Glu
2164          1650          1655          1660
2166 Ile Ala Arg Ile Ser Arg Lys Asn Gly Gln Phe Gln Arg Ala Phe Asn
E--> 2167 665          1670          1675          1680
2169 Ala Ile Leu Lys Ala Met Asp Leu Asp Lys Pro Leu Ala Thr Ile Glu
2170          1685          1690          1695
2172 His Ala Gln Trp Trp Trp His Gln Gly Gln His Arg Lys Ala Ile Ser
2173          1700          1705          1710
2175 Glu Leu Asn Phe Ser Leu Asn Asn Met Phe Asp Leu Val Asp Glu
2176          1715          1720          1725
2178 His Glu Glu Arg Pro Lys Asn Arg Lys Glu Thr Leu Gly Asn Pro Leu
2179          1730          1735          1740
2181 Lys Gly Lys Val Phe Leu Lys Leu Thr Lys Trp Leu Gly Lys Ala Gly
E--> 2182 745          1750          1755          1760
2184 Gln Leu Gly Leu Lys Asp Leu Glu Thr Tyr Tyr His Lys Ala Val Glu
2185          1765          1770          1775
2187 Ile Tyr Ser Glu Cys Glu Asn Thr His Tyr Tyr Leu Gly His His Arg
2188          1780          1785          1790
2190 Val Leu Met Tyr Glu Glu Glu Gln Lys Leu Pro Val Asn Glu Gln Ser
2191          1795          1800          1805
2193 Glu Arg Phe Leu Ser Gly Glu Leu Val Thr Arg Ile Ile Asn Glu Phe
2194          1810          1815          1820

```

*same*

## RAW SEQUENCE LISTING

DATE: 07/23/2004

PATENT APPLICATION: US/10/685,258A

TIME: 12:50:13

Input Set : A:\34132seq.txt

Output Set: N:\CRF4\07232004\J685258A.raw

```

E--> 2196 Gly Arg Ser Leu Tyr Tyr Gly Thr Asn His Ile Tyr Glu Ser Met Pro
      2197 825      1830      1835      1840
2199 Lys Leu Leu Thr Leu Trp Leu Asp Phe Gly Ala Glu Glu Leu Arg Leu
2200      1845      1850      1855
2202 Ser Lys Asp Asp Gly Glu Lys Tyr Phe Arg Glu His Ile Ile Ser Ser
2203      1860      1865      1870
2205 Arg Lys Lys Ser Leu Glu Leu Met Asn Ser Asn Val Cys Arg Leu Ser
2206      1875      1880      1885
2208 Met Lys Ile Pro Gln Tyr Phe Phe Leu Val Ala Leu Ser Gln Met Ile
2209      1890      1895      1900
2211 Ser Arg Val Cys His Pro Asn Asn Lys Val Tyr Lys Ile Leu Glu His
E--> 2212 905      1910      1915      1920
2214 Ile Ile Ala Asn Val Val Ala Ser Tyr Pro Gly Glu Thr Leu Trp Gln
2215      1925      1930      1935
2217 Leu Met Ala Thr Ile Lys Ser Thr Ser Gln Lys Arg Ser Leu Arg Gly
2218      1940      1945      1950
2220 Lys Ser Ile Leu Asn Val Leu His Ser Arg Lys Leu Ser Met Ser Ser
2221      1955      1960      1965
2223 Lys Val Asp Ile Lys Ala Leu Ser Gln Ser Ala Ile Leu Ile Thr Glu
2224      1970      1975      1980
2226 Lys Leu Ile Asn Leu Cys Asn Thr Arg Ile Asn Ser Lys Ser Val Lys
E--> 2227 985      1990      1995      2000
2229 Met Ser Leu Lys Asp His Phe Arg Leu Ser Phe Asp Asp Pro Val Asp
2230      2005      2010      2015
2232 Leu Val Ile Pro Ala Lys Ser Phe Leu Asp Ile Thr Leu Pro Ala Lys
2233      2020      2025      2030
2235 Asp Ala Asn Arg Ala Ser His Tyr Pro Phe Pro Lys Thr Gln Pro Thr
2236      2035      2040      2045
2238 Leu Leu Lys Phe Glu Asp Glu Val Asp Ile Met Asn Ser Leu Gln Lys
2239      2050      2055      2060
2241 Pro Arg Lys Val Tyr Val Arg Gly Thr Asp Gly Asn Leu Tyr Pro Phe
E--> 2242 065      2070      2075      2080
2244 Leu Cys Lys Pro Lys Asp Asp Leu Arg Lys Asp Ala Arg Leu Met Glu
2245      2085      2090      2095
2247 Phe Asn Asn Leu Ile Cys Lys Ile Leu Arg Lys Asp Gln Glu Ala Asn
2248      2100      2105      2110
2250 Arg Arg Asn Leu Cys Ile Arg Thr Tyr Val Val Ile Pro Leu Asn Glu
2251      2115      2120      2125
2253 Glu Cys Gly Phe Ile Glu Trp Val Asn His Thr Arg Pro Phe Arg Glu
2254      2130      2135      2140
2256 Ile Leu Leu Lys Ser Tyr Arg Gln Lys Asn Ile Pro Ile Ser Tyr Gln
E--> 2257 145      2150      2155      2160
2259 Glu Ile Lys Val Asp Leu Asp Phe Ala Leu Arg Ser Pro Asn Pro Gly
2260      2165      2170      2175
2262 Asp Ile Phe Glu Lys Lys Ile Leu Pro Lys Phe Pro Pro Val Phe Tyr
2263      2180      2185      2190
2265 Glu Trp Phe Val Glu Ser Phe Pro Glu Pro Asn Asn Trp Val Thr Ser
2266      2195      2200      2205
2268 Arg Gln Asn Tyr Cys Arg Thr Leu Ala Val Met Ser Ile Val Gly Tyr

```

*same*

## RAW SEQUENCE LISTING

DATE: 07/23/2004

PATENT APPLICATION: US/10/685,258A

TIME: 12:50:13

Input Set : A:\34132seq.txt

Output Set: N:\CRF4\07232004\J685258A.raw

2269      2210                      2215                      2220  
 2271 Val Leu Gly Leu Gly Asp Arg His Gly Glu Asn Ile Leu Phe Asp Glu  
 E--> 2272 225                      2230                      2235                      2240  
 2274 Phe Thr Gly Glu Ala Ile His Val Asp Phe Asn Cys Leu Phe Asp Lys  
 2275                      2245                      2250                      2255  
 2277 Gly Leu Thr Phe Glu Lys Pro Glu Lys Val Pro Phe Arg Leu Thr His  
 2278                      2260                      2265                      2270  
 2280 Asn Met Val Asp Ala Met Gly Pro Thr Gly Tyr Glu Gly Gly Phe Arg  
 2281                      2275                      2280                      2285  
 2283 Lys Ala Ser Glu Ile Thr Met Arg Leu Leu Arg Ser Asn Gln Asp Thr  
 2284                      2290                      2295                      2300  
 2286 Leu Met Ser Val Leu Glu Ser Phe Leu His Asp Pro Leu Val Glu Trp  
 E--> 2287 305                      2310                      2315                      2320  
 2289 Asn Arg Lys Lys Ser Ser Ser Lys Tyr Pro Asn Asn Glu Ala Asn Glu  
 2290                      2325                      2330                      2335  
 2292 Val Leu Asp Ile Ile Arg Lys Lys Phe Gln Gly Phe Met Pro Gly Glu  
 2293                      2340                      2345                      2350  
 2295 Thr Ile Pro Leu Ser Ile Glu Gly Gln Ile Gln Glu Leu Ile Lys Ser  
 2296                      2355                      2360                      2365  
 2298 Ala Val Asn Pro Lys Asn Leu Val Glu Met Tyr Ile Gly Trp Ala Ala  
 2299                      2370                      2375                      2380  
 2301 Tyr Phe  
 E--> 2302 385

*same*

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/685,258A

DATE: 07/23/2004

TIME: 12:50:14

Input Set : A:\34132seq.txt

Output Set: N:\CRF4\07232004\J685258A.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:903 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2  
M:332 Repeated in SeqNo=2  
L:2047 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4  
M:332 Repeated in SeqNo=4